Simpson partners with Stanford, FAA on drone research



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The federal agency charged with regulating the use of unmanned aerial vehicles has made an lowa college a research partner.

The Federal Aviation Administration has named Simpson College in Indianola an affiliate member of its Centers of Excellence for Commercial Space

Transportation program. The FAA uses the centers to access university and college research.

Under the partnership, Simpson will work with Stanford University and the FAA to conduct research into drones, including whether regional airports in rural areas can be used as hubs to launch the vehicles, said Chris Draper, the head of Simpson's EMERGE program.

Draper said the research will also look into safety concerns regarding drones in flight, such as the airspace around regional airports and proximity to populated areas.

"With aircraft, you've got a pilot in it. When it takes off out of an airport, we know it's going to come down where it's intending to go. ... With these unmanned vehicles, we just don't know what can fail on them yet. Because of that we need to create boundaries for them to operate," Draper said.

Utilizing regional airports as bases for drones could also open the door for highpaying jobs in rural areas, he said.

Simpson physics professor Aaron Santos and EMERGE fellow Kristina Smith are working with Draper on the research.



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Commercial drones taking off in Iowa

Currently, the common drones flying around U.S. skies are small quadcopters used to take photos. Advocates for the use of unmanned aerial vehicles have said larger drones can be used to deliver fertilizer and pesticides onto farm fields.

Those larger, payload-carrying vehicles present a bigger risk if they fail mid-flight, Draper said.

"What we're talking about more importantly, if we're really launching the types of agriculture innovations that can come from drones, we need to know what regional airports can you fly out of what is essentially a massive flying fertilizer truck," Draper said.

The FAA has started permitting some operators to fly unmanned aerial vehicles, even though the agency is still determining how to regulate the new industry. Operators who receive authorizations to fly have to abide by a long list of rules, such as keeping the drones under a certain height.

In Iowa, about 20 individuals or companies have received FAA authorizations to fly drones.

Draper said Simpson's partnership with Stanford and the FAA gives the college involvement in the development of future drone regulations.

"Most importantly, what we have the opportunity to do is help craft the direction for how drone regulation has the opportunity to go to ensure it is as enabling as it can be, while protecting the public to the level of safety the public expects," he said.